

Alaska Public Broadcasting, Inc.
Close Out Report
Project No. 174-05
June 27, 2012

The *Public Broadcasting Facilities & Equipment Modernization Project* work scope was designed to meet priority infrastructure, equipment and technology needs identified in a system wide needs assessment conducted in 2004. Funded by the Rasmuson Foundation, the assessment results guided two key initiatives, the establishment of a Capital Grant Program for stations and the conversion of public radio transmission technology from analog to digital. The project also supported pioneering work in the development of energy saving transmission technology, standardization of critical equipment and technology at the station level, and acquisition of diagnostic tools and test equipment for system benefit. In addition, the work scope included two minor components: the Alaska Rural Communications Service and satellite interconnection revitalization project, and development of a digital distribution network between stations.

Facilities & Equipment Modernization Project – Capital Grant Program

The primary work scope component of Project #174-05 was the Capital Grant Program for stations which was modeled upon three established grant programs familiar to public broadcasters in Alaska: the Rasmuson Foundation, the Corporation for Public Broadcasting, and the Public Telecommunications & Facilities Program, U.S. Dept. of Commerce. As a result, the grant program embodied a high degree of integrity and accountability. A full chronology of the grant program with milestones can be reviewed in the final quarterly progress report dated March 31, 2012.

Following is a brief summary of key developments and results:

In 2005, APBI developed the grant program concept, guidelines, priorities, procedures, station application materials, administrative systems and the panel review process. The grant program was launched in the fall of 2005 and ended in spring 2012.

A total of 115 station based projects were funded at \$4.9m with 53% of these dollars supporting facilities improvement projects and 47% supporting equipment modernization projects. The total combined cost of the 115 projects was just over \$6m. The total station match is \$1.1m or 18%.

Through the 115 projects, an incredible range of capital improvements occurred at stations. These improvements fell into several categories: equipment replacement/modernization, structural repair (walls, floors, etc.), studio and work space renovations, electrical, plumbing, energy, ADA compliance, and work space safety upgrades. All 26 stations benefitted directly and indirectly from the capital funds. In addition, the system facilities and equipment modernization project funded the statewide upgrade of station based Emergency Alert System (EAS) equipment, and the acquisition of test equipment for station and system benefit.

The grant panel process produced a legitimate, critical, independent review of all proposals per the grant program priorities and guidelines. Panelists identified and discussed the strengths and weaknesses of all proposals and helped guide the decision making process in terms of project importance and feasibility. In 2007, an update of the system wide assessment was completed to ensure that subsequent proposals aligned with local board approved station priorities.

APBI learned early on that the stations in aggregate could successfully handle one capital project a year, a planning issue that lead to the first grant award extension request. The second extension was approved when it became clear that a handful of projects were not going to be completed by the final deadline. This extension allowed APBI to keep projects open and provide adequate time to get qualified engineers and contractors into communities to complete projects. All station and system project activity was completed by the March 31, 2012 deadline.

Public Radio Conversion to Digital Transmission

Alaska's 26 public radio licensees changed their primary transmission equipment to the new standard for digital broadcasting. Funding the appropriate needs for all of the stations totaled approximately \$4.1 million. The Corporation for Public Broadcasting committed \$2.5 million and the Rasmuson Foundation committed approximately \$700k toward the total. Denali Commission funding assured that the project had the resources to meet anticipated as well as unanticipated needs during the multiyear statewide deployment, installation and follow-up with stations. Coordination of group bids on behalf of the stations yielded a discount of 26% resulting in savings of \$468k. Group purchasing also resulted in standardizing core transmission technology statewide which fosters more efficient and cost effective engineering and technical support today.

Dynamic Carrier Control Project

Dynamic Carrier Control (DCC) technology, developed in Europe in the 1980's and in use around the world, is a method of modulation which helps reduce electricity costs. Because utility costs in the US were until recently quite low, and due to a now obsolete FCC regulation forbidding this technology, DCC was not available in the United States. APBI applied to and received from the FCC an Experimental Authorization to show that this technology could be successfully applied to AM stations in Alaska without degradation of audio. The subsequent installation of this cutting edge energy saving technology was completed at seven stations: KDLG-AM, Dillingham, KOTZ-AM, Kotzebue, KYUK-AM, Bethel, KBBI-AM, Homer, KCHU-AM, Valdez, KSKO-AM, McGrath and KBRW-AM, Barrow. All seven transmitters have been converted and station managers report power savings in the order of 25-30 percent.

In 2011 and 2012, APBI presented papers on this project at the Public Radio Engineering Conference and to the Society of Broadcast Engineers at the National Association of Broadcasters convention. Based on the pioneering work done by APBI in this project the FCC has approved the use of DCC nationwide and broadcasters in Alaska and the Lower 48 are showing great interest in adopting this energy saving technology.

ARCS/Satellite Interconnection Revitalization & Digital Distribution Network

These minor work scope components supported repair and replacement of existing broadcast infrastructure used to deliver public telecommunications services via radio and television to Alaskans across the state; and maintenance of a data network interconnecting Alaska's public radio and television stations by means of a digital intranet and the internet. These project work scopes were funded by the Denali Commission in FY04 under project #0117-DC-2004-15. These additional funds in project #174-05 helped complete these projects. For more information, a close out report of project #0117-DC-2004-15 was accepted by the Denali Commission on 9/30/2010.

Summary & Conclusion

For many Alaskans, especially rural and bush residents, public broadcasting is *the* primary source for community news, information and engagement. Through this grant award, the Denali Commission helped reverse further deterioration of this important communications infrastructure. The grant provided much needed capital to address critical system-wide equipment, technology and facilities priorities that accumulated over the preceding decade. The grant allowed for the establishment of a Capital Grant Program for stations and the conversion of public radio transmission technology from analog to digital. The project supported pioneering work in the development of energy saving transmission technology, standardization of equipment and technology at the station level, and acquisition of diagnostic tools and test equipment for system benefit. All of this work was done in partnership between APBI, the stations, community based volunteers and the Denali Commission.

This project has had a tremendous public service impact on the twenty-six stations that collectively serve Alaska. Public broadcasting is an information lifeline for Alaska's most unserved and under-served residents and this grant breathed new life into these locally owned and operated stations. On behalf of a grateful statewide audience, stakeholders and partners involved with this project, APBI expresses thanks and appreciation to the Denali Commission for the funding and the privilege of being a project partner. We also thank and appreciate the efforts of the Denali Commission staff for being professional, helpful and easy to work with over the course of the project.
